

VIA FACSIMILE (571) 273-8300

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

Claims 1-13 (cancelled).

14. (Amended) An automated rotary microtome blade changing apparatus, comprising

- (a) an upper stage adapted to releasably engage a supply and a waste cartridge, said upper stage including a loading segment adapted to engage and move blades contained within said supply cartridge into a cutting position;
- (b) means for releasably clamping said blades in place for cutting operations, comprising
 - a fixed support plate adapted to support a first side of said blade, said fixed support plate in intimate contact with the upper stage body,
 - a clamping plate having a clamping surface capable of engaging a second side of said blade when the clamping plate is pivoted into the clamping position,
 - a pivot means for supporting a midpoint region of said clamping plate, said pivot means itself being integral to or supported by said upper stage,
 - a clamping cam that engages said clamping plate, said clamping cam being mounted on a drive shaft and providing motion orthogonal to said drive shaft axis thereby pivoting the clamping plate about said pivot point;
- (c) means for powering the movement of blades and clamping mechanisms, comprising
 - an electric motor mounted proximate to said drive shaft,
 - a motor pulley mounted between said drive shaft and said electric motor and interconnected therewith so that power from said motor is transferred to said drive shaft; and
- (d) means for electronically controlling all of the functions of the apparatus, comprising
 - a microcontroller in electrical communication with a switch on a keypad, a power source, a motor, and safety interlocks, a display, and data buttons for both waste and supply cartridges.

15. (Amended) An automated rotary microtome blade changing apparatus, comprising

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- (a) an upper stage adapted to releasably engage a supply and a waste cartridge, said upper stage including a reverser shuttle adapted to engage and move blades contained within said supply cartridge into a cutting position;
- (b) means for releasably clamping said blades in place for cutting operations, comprising a fixed support plate adapted to support a first side of said blade, said fixed support plate in intimate contact with the upper stage body, a clamping plate having a clamping surface capable of engaging a second side of said blade when the clamping plate is pivoted into the clamping position, a pivot means for supporting a midpoint region of said clamping plate, said pivot means itself being integral to or supported by said upper stage, a clamping cam that engages said clamping plate, said clamping cam being mounted on a drive shaft and providing motion orthogonal to said drive shaft axis thereby pivoting said clamping plate about said pivot point;
- (c) means for powering the movement of blades and clamping mechanisms, comprising an electric motor adapted to engage said drive shaft, a drive gear mounted on said drive shaft, said drive gear transmitting power to said clamping means and said reverser shuttle; and
- (d) means for electronically controlling all of the functions of the apparatus, comprising a microcontroller in electrical communication with a switch-on a keypad, a power source, said motor, and safety interlocks, a display, and data buttons for both waste and supply cartridges.